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forms; thus, in the latter case:

$$\int e^{\theta^{1/4}} d\theta = -4! e^{\theta^{1/4}} \left(1 - \frac{\theta^{1/4}}{1} + \frac{\theta^{2/4}}{2!} - \frac{\theta^{3/4}}{3!} \right) + 4!,$$

differing from the previous result only by a constant term.

This result is general, and gives, when the exponent of the argument is a unit fraction:

$$\int e^{\theta^{1/n}} d\theta = (-1)^{n-1} n! e^{\theta^{1/n}} \sum_{t=0}^{t=n-1} (-1)^t \frac{\theta^{t/n}}{t!},$$

or, the same expression plus the term $(-1)^n n!$.

III. RELATING TO MAGIC SQUARES FOR THE NEW YEAR, 1918.

By S. A. COREY, Albia, Iowa.

The two following 4×4 magic squares are taken indiscriminately one from each of two large families of 4×4 magic squares with sum 1918 which may be formed in like manner from the two sets of 15 square numbers here employed. It is improbable that other families of 4×4 magic squares with the sum 1918 can be found with similar characteristics.

464	383	513	558
591	480	482	365
414	429	527	548
449	626	396	447

(A)

461	409	516	532
565	483	508	362
440	426	501	551
452	600	393	473

(B)

Some of the peculiarities of the *families* of magic squares from which (A) and (B) are taken are as follows:

Each number employed may be decomposed into the sum of the squares of *four* separate numbers taken from the series of natural numbers, 1 to 18 inclusive (18 being the last two figures of 1918).

In forming such sums *all* the square numbers used are used just *four* times with *one* exception in each case as follows:

In (A) 10 is used *eight* times, and

In (B) 6 is used *eight* times.

In forming the numbers employed in (A) all the natural numbers, 1 to 18 inclusive, are used, except 1, 11 and 13, the sum of which is 25.

In forming the numbers employed in (B) all the natural numbers, 1 to 18 inclusive, are used, except 5, 9 and 11, the sum of which is likewise 25. To illustrate:

$$2^2 + 6^2 + 10^2 + 18^2 = 464, 3^2 + 7^2 + 10^2 + 15^2 = 383, 4^2 + 8^2 + 12^2 + 17^2 = 513, 5^2 + 9^2 + 14^2 + 16^2 = 558 \text{ [464, 383, 513 and 558 being the numbers in}$$

the first row of (A)]; $1^2 + 6^2 + 10^2 + 18^2 = 461$, $2^2 + 6^2 + 12^2 + 15^2 = 409$, $3^2 + 7^2 + 13^2 + 17^2 = 516$, $4^2 + 8^2 + 14^2 + 16^2 = 532$ [461, 409, 516 and 532 being the numbers in the first row of (B)].

We note above that the sum of the natural numbers not used in (A) is 25 and that 10 is used more than the usual number of times. Similarly in (B) the numbers 25 and 6 are exceptional numbers. Were we inclined to be superstitious we might therefore say that October 25 (10-25) and June 25 (6-25) are dates of transcendent importance in 1918, say, the date of the signing of the treaty of peace, and the date of cessation of fighting in the world war.

UNDERGRADUATE MATHEMATICS CLUBS.

EDITED BY R. C. ARCHIBALD, Brown University, Providence, R. I.

It is designed that this new department of the MONTHLY shall record the details of organization and activity of each undergraduate mathematics club in America, shall serve as a medium of communication between such clubs, and shall contain information helpful and suggestive for their guidance, and for the development of their usefulness.

As soon as the information can be collected a list of the clubs will be published. To 35 clubs already discovered appeal has been made for details, a portion of which will be given in connection with this list. It is earnestly desired that every other club shall make itself known to the editor, reporting on such things as: (1) the club's exact name, (2) the date (year and month) of organization, (3) the club's object and those eligible for membership, (4) the names of the officers of the club for 1917-18, (5) the number of members of the club, the average attendance, and the number of meetings held each year, (6) the dates of meetings in 1917-18, the titles of papers read and the names of the speakers. The editor would like to receive also copies of all printed programs for the current and earlier years.

CLUB ACTIVITIES.

THE MATHEMATICS CLUB OF BROWN UNIVERSITY, 1917-18.

Membership is open: (1) to those who have had or are taking a course in analytic geometry; (2) to the members of the freshman class who win the prizes awarded in connection with the competitive examination on original problems in entrance mathematics; and (3) to mathematical students in the second semester of the freshman year who have attained to the higher honor grade in a mathematical course of the first semester. Average attendance: 52.

Chairman: Professor N. F. Davis.

Committee on Program: Professor R. G. D. Richardson, Marion R. Luther Gr., Mary I. Briggs '18, Clarence R. Adams '18, James B. Hobbs '18.

Committee on Arrangements: Doctor T. H. Brown, Lydia L. Cooper Gr., Esther E. Brintzenhoff '19, Albert S. Pratt '18, Chauncey D. Wentworth '20.